

WHAT IS CLAIMED IS:

1. A method of capturing images in a camera, the method comprising:

acquiring a first set of image data based on a first frame of light entering the camera;

performing at least one pre-capture processing function on the first set of image data to produce a pre-capture result;

acquiring a second set of image data based on a second frame of light entering the camera;

performing at least one post-capture processing function on the second set of image data to produce a post-capture result;

generating final image data based on the pre-capture result and the post-capture result.

2. The method of claim 1 wherein performing at least one pre-capture processing function comprising performing a white balance processing function to produce a white balance value as the pre-capture result.

3. The method of claim 1 wherein performing at least one pre-capture processing function comprises

performing a contrast adjustment function to produce a contrast value as the pre-capture result.

4. The method of claim 1 wherein performing at least one pre-capture processing function comprises performing a red-eye reduction function to produce a set of red-eye compensation values as the pre-capture result.

5. The method of claim 1 wherein performing at least one pre-capture processing function comprises performing a flesh tone correction function to produce a flesh tone correction value as the pre-capture result.

6. The method of claim 1 wherein performing the at least one pre-capture processing function further comprises determining the amount of available memory for storing the final image data and if the available memory is less than the amount of memory needed to store the final image data, indicating to the user that there is insufficient memory before acquiring the second set of image data.

7. The method of claim 1 wherein performing the at least one pre-capture processing function further comprises determining the amount of available memory for storing the final image data and if the available memory is less than the amount of memory

needed to store the final image data, reallocating memory before acquiring the second set of image data.

8. The method of claim 1 further comprising receiving an external indication that an image should be captured before acquiring the second set of image data.

9. The method of claim 1 further comprising receiving a pre-capture event before acquiring the first set of image data.

10. The method of claim 9 wherein the pre-capture event is an indication that a user has pressed a capture button half-way down.

11. The method of claim 9 wherein the pre-capture event is produced by a software routine.

12. The method of claim 1 further comprising triggering a red-eye reduction flash before acquiring the first set of image data and triggering a main flash before acquiring the second set of image data.

13. The method of claim 12 wherein performing the at least one pre-capture processing function comprises determining if a set of flash parameters is properly set based on the red-eye reduction flash and producing a new set of flash parameters as the pre-capture result if the flash parameters are not

properly set and wherein generating the final image data based on the pre-capture result and the post-capture result comprises using the new set of flash parameters when the main flash is triggered and generating the final image data based on the corresponding post-capture result.

14. The method of claim 1 further comprising performing at least one pre-capture processing function on a portion of the second set of image data to produce a test result and comparing the test result to a pre-capture result.

15. The method of claim 14 further comprising performing the pre-capture processing function on the entire second set of image data if the test result and pre-capture result are not sufficiently similar.

16. The method of claim 1 wherein performing at least one pre-capture processing function comprises identifying defective pixels in the camera and providing the identity of the defective pixels as the pre-capture result.

17. A camera having processor-executable components for capturing images, the components comprising:

an image acquisition component capable of acquiring image data representing a single frame of light;

a pre-capture processing component capable of performing a pre-capture function based on image data acquired by the image acquisition component for a first frame of light;

a post-capture processing component capable of performing a post-capture function on image data acquired by the image acquisition component for a second frame of light; and

an image production component capable of producing final image data based on results from the pre-capture function and the post-capture function.

18. The camera of claim 17 wherein the pre-capture processing component is capable of performing a white balance function based on the image data for the first frame of light.

19. The camera of claim 17 wherein the pre-capture processing component is capable of performing a contrast function based on the image data for the first frame of light.

20. The camera of claim 17 wherein the pre-capture processing component is capable of performing a red-eye reduction function based on the image data for the first frame of light.

21. The camera of claim 17 wherein the pre-capture processing component is capable of performing a memory resource function to determine if there is sufficient available memory to store the final image data.

22. The camera of claim 21 further comprising a user notification component capable of notifying the user when there is insufficient memory to store the final data before the image acquisition component acquires image data for a second frame of light.

23. The camera of claim 18 further comprising a memory management component that is capable of reallocating memory resources before the image acquisition component acquires image data for a second frame of light.

24. The camera of claim 17 wherein the pre-processing component performs a pre-capture function on a portion of the image data for the second frame of light and wherein the camera further comprises a comparison component capable of comparing the results of performing the same pre-capture function on the image data for the first frame of light and on the portion of the image data for the second frame of light.

25. The camera of claim 24 wherein the comparison component causes the pre-capture

processing component to perform the pre-capture function on all of the image data for the second frame of light when the results of performing the pre-capture function on a portion of the image data for the second frame of light are substantially different than the results of performing the pre-capture function on the image data for the first frame of light.

26. The camera of claim 17 wherein the pre-capture processing component is capable of adjusting flash parameters of the camera based on image data acquired for the first frame of light.

27. The camera of claim 17 wherein the pre-capture processing component is capable of identifying defective pixels in the camera based on image data acquired for the first frame of light.